

HERITAGE CRIME AND FORENSIC ARCHAEOLOGY: AN INTEGRATIVE APPROACH

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Introduction

Illegal activities affecting cultural heritage assets pose a significant challenge to societies worldwide. Ranging from looting and illicit trafficking of artefacts to vandalism and unauthorised alterations of historic sites, these crimes not only rob us of invaluable historical and cultural insights but erode the very fabric of our shared heritage. Forensic archaeology emerged in Europe as a distinct discipline during the 1980s and has become a pivotal ally in combating heritage crime, employing scientific principles and techniques within the framework of criminal investigations to preserve and protect our cultural legacy.

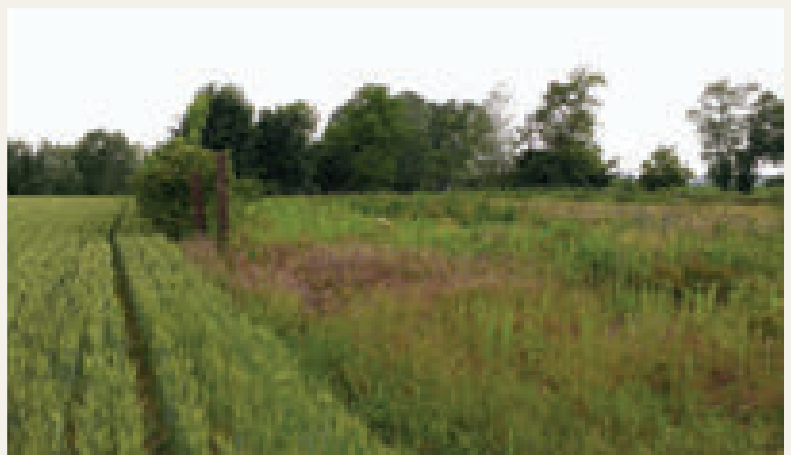
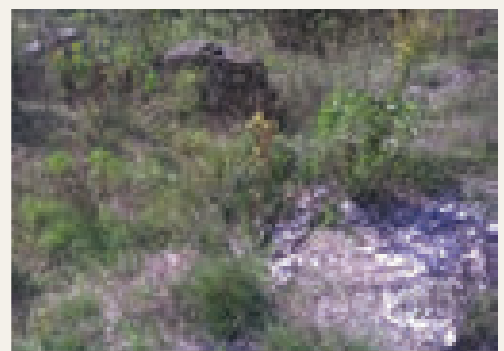
Cases include the examination of sites to assess and interpret the mechanisms of damage (what, where, how, when). Geophysics is used to assess damage and to detect concealed stolen items. Items are examined to understand provenance, date and material composition, and to detect trace evidence. Dating items not only applies to trafficked artefacts, but to the movement of modern items made from prohibited

materials (ivory, horn, bone, turtle/tortoise shell, etc) that are presented as antiquities to circumvent such laws.

Forensic archaeologists: scientific analysts

Forensic archaeologists, leveraging their expertise in the systematic recovery and analysis of material evidence, stand on the front lines of heritage crime investigations. Their role extends beyond the confines of traditional archaeology into the legal arena, where they serve as expert witnesses. The use of archaeological techniques in criminal casework in the UK, therefore, follows a separate path for accreditation, through ClfA, from conventional archaeology and is subject to a specific code of practice (*Standard and guidance for forensic archaeologists*), which is endorsed by the Forensic Science Regulator.

Using rigorous scientific methodologies, forensic archaeologists piece together evidence from crime scenes, reconstructing activities and offering objective interpretations that can substantiate or refute legal



Some examples where the expertise of the forensic archaeologist proved to be essential. There are signs of illegal excavations within an archaeological site and artefacts unlawfully stolen by tomb raiders. Credit: Barone PM

claims. Their contributions, grounded in factual results, are crucial in elucidating the circumstances surrounding heritage crimes, thereby aiding in the prosecution of offenders and the recovery of lost or damaged artefacts.

Forensic archaeologists also examine seized items, and this work may include sampling soils, pollen, and botanical traces from such items. Joint examinations with other forensic scientists ensure the preservation and collection of other evidence types, such as DNA and fingerprints. Subsequent analysis by forensic specialists enables these environmental indicators to be used as trace evidence to understand the provenance and geographical movement of objects, as

well as physical associations between recovered objects, heritage sites, suspects and vehicles.

Cultural heritage curators: stewards of legacy

In parallel, cultural heritage curators undertake the vital task of safeguarding our collective past. Institutions such as English Heritage, Regional Archaeological Advisors, and the National Trust embody the stewardship role, focusing on the preservation and documentation of and public engagement with cultural heritage sites and collections. Unlike their counterparts in forensic archaeology, curators are tasked with prevention of heritage crime, including site monitoring, risk assessment and the implementation of protective strategies. Their efforts ensure that heritage assets remain accessible and intact for future generations, fostering a continuous dialogue between the past and the present.

Collaborative efforts in tackling heritage crimes

The synergy between forensic archaeologists and cultural heritage curators is exemplified through numerous case studies across the UK and Europe. For instance, in response to spates of looting at ancient sites, forensic archaeologists have employed ground-penetrating radar and other non-invasive technologies to assess the extent of damage and recover stolen items, while curators have intensified surveillance measures and public awareness campaigns to deter future incidents. These collaborative efforts underscore the multifaceted approach required to effectively combat heritage crimes, leveraging both scientific inquiry and conservation ethics.

The forensic archaeologist collaborates with, and provides guidance to, experts from traditional archaeological backgrounds, such as specialists in specific artefact types. This not only ensures that their expert knowledge is harnessed, but also that their results are presented to the criminal justice system in a format and language that adheres to the legal requirements for expert witnesses. No individual can specialise in all areas relevant to such cases, so these types of collaboration are essential.

Navigating challenges and ethical considerations

The intersection of archaeology, law and heritage conservation presents unique challenges and ethical dilemmas. Forensic archaeologists and curators must navigate issues related to evidence preservation, the repatriation of artefacts and the potential impact of their work on existing cultural narratives. Moreover, the evolving nature of heritage crimes, driven by advancements in technology and changing market demands, necessitates continuous adaptation and learning. Addressing these challenges requires a



Recovery and subsequent repatriation of archaeological artefacts to Afghanistan thanks to investigations by the Manhattan District Attorney's Office (DANY) and Homeland Security Investigations (HSI). Credit: DANY



Carabinieri Command for the Protection of Cultural Heritage (TPC) in Bari (Italy) after seizing archaeological artifacts illegally stolen from archaeological sites in Puglia and Lucania in southern Italy. Credit: Carabinieri TPC

Future directions

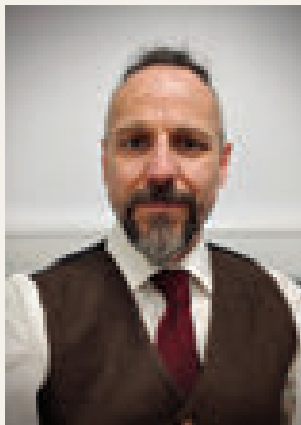
The role of forensic archaeology in heritage crime investigation will undoubtedly expand, driven by technological innovations and an increasing global awareness of cultural heritage's value. The continued collaboration between forensic archaeologists and cultural heritage curators will be instrumental in devising more effective strategies against heritage crimes. By fostering a culture of respect and appreciation for our shared history, we can ensure that our cultural legacy is preserved for the enlightenment and enjoyment of future generations. The fight against heritage crime is not just a matter of law enforcement or scientific investigation; it is a testament to our collective resolve to honour and protect the narrative of humanity itself.

commitment to ethical practice, interdisciplinary collaboration and community engagement, ensuring that the protection of cultural heritage remains a dynamic and inclusive endeavour.

UK law requires expert witnesses to be demonstrably objective. This means that an expert witness must not attempt to 'build a case' against a suspect; that is the role of the prosecuting body and of heritage curators. The expert witness must instead provide objective interpretations supported by demonstrable factual evidence.

Forensic archaeologists are called by defence solicitors to provide reviews of work undertaken by other archaeologists and heritage professionals. Although the authors of such statements can be well-meaning, if they have not been trained in forensics then unfamiliarity with the criminal justice system and the requirements of expert witnesses can cause significant problems for investigations and can undermine the evidence being presented.

The threshold of confidence in results and interpretations differs significantly between conventional archaeology and forensic archaeology. Conventional archaeology may allow for a broader degree of speculation, whereas forensic archaeology operates within a legal and judicial context, where results and interpretations must be supported by demonstrable evidence and necessary caveats and alternative explanations for the evidence encountered. These results, and the degree of certainty expressed, must be capable of withstanding critical scrutiny in a courtroom.



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